

L 9425-66 EWT(1) GW

ACC NR: AR5023009

UR/0269/65/000/003/0056/0056
523.7:525.24

SOURCE: Ref. zh. Astronomiya, Abs. 8.51.476

AUTHOR: Gordeyev, O.K.

TITLE: Dependence of daily solar variations in the magnetic field on solar wave radiation

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 45, 1964, 186-190

TOPIC TAGS: astronomic data, solar magnetic field, solar radiation effect,
SOLAR CYCLE

TRANSLATION: A study was made of the dependence of the amplitude of quiet daily solar variations in a magnetic field on solar wave energy. Equations were derived for the regression between the solar constant, expressed in equatorial hours, and the S_q -variations amplitude for middle latitude stations in the Soviet Union. The fluctuation in the S_q -variations amplitude during the year is in linear dependence (for middle latitude stations) on the volume of solar wave radiation. The cyclic variability of the regression equation coefficient in the solar cycle was developed on the basis of the analysis.

SUB CODE: AA

ENCL: 00

Cord 1/1 *nds*

L 15263-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AR5016451

SOURCE CODE: UR/0169/65/000/006/A034/A034

AUTHOR: Likhachev, A.I.; Gordeyev, O.K.

ORG: none

TITLE: Interrelation between the ionospheric parameters of the F2 stratum and the quite-sun variations in Tomsk the magnetic field

SOURCE: Ref. zh. Geofizika, Abs. 6A192

REF SOURCE: Tr. Sibirsk. fiz.-tekh. in-ta pri Tomskom un-te, vyp. 45, 1964, 83-92

TOPIC TAGS: ionosphere, geomagnetic field, solar energy

TRANSLATION: On the basis of an established relationship between ionospheric parameters and variations in elements of a geomagnetic field under the effect of solar energy entering the atmosphere, regression equations are given for the interrelationship between ionospheric parameters and S_q variations in a magnetic field. It is shown that the regression equations define the relationship between the observed values of ionospheric parameters and the S_q variations.

SUB CODE: 03, 04, 08

Card 1/1

UDC: 550.383.2

GORDEYEV, O. N.

Karelia - Plankton

Urozero is a type of oligotrophic water basin in Central Karelia. Uch. zap. Kar. Fin. un. 3, no. 3, 1948.

Monthly list of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

CORDEYEV, O.N., dotsent

Distribution of relict crustaceans in the Karelian lakes. Uch.
zap.Kar.ped.inst. 7:16-33 '58. (MIRA 15:2)
(Karelia--Crustacea)

ALEKSANDROV, B.M.; GORDEYEV, O.N.; ZABOLOTSKIY, A.A.

Limnological characteristics of Lake Lososinskoye. Uch. zap. Kar. ped.
inst. 7:41-65 '58. (MIRA 15:2)

(Lososinskoye, Lake—Limnology)

GORDEYEV, O.N.

Hydrobiological characteristics of some lakes in Suoyarvi District,
Karelian A.S.S.R. *Trudy Kar.fil.AN SSSR* no.13:108-125 '58.
(MIRA 13:5)

(Suoyarvi District--Limnology)

GORDEYEV, O.N.; GORDEYEVA, I.N.

Hydrobiological characteristics of Pyaozero and feeding habits of
fish. Uch.sap. Kar.ped.inst. 8:11-35 '59. (MIRA 13:11)
(Pyaozero, lake--Fresh-water biology)

POLYANSKIY, Yu.I., otv. red.; GORDEYEV, O.N., red.; KUDERSKIY,
L.A., red.; LUTTA, A.S., red.; SOKOLOVA, V.A., red.

[Fauna of the lakes of Karelia; invertebrates] Fauna ozer
Karelii; bespozvonochnye. Moskva, Nauka, 1965. 323 p.
(MIRA 18:9)

1. Akademiya nauk SSSR. Karel'skiy filial, Petrozavodsk.
Institut biologii.

GORDEYEV, P. A.

124-1957-2-1826

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 52 (USSR)

AUTHOR: Gordeyev, P. A.

TITLE: On Some Peculiarities of the Combustion in an Engine Having a Combustion Chamber in the Piston (O nekotorykh osobennostyakh protsessa sgoraniya v dvigatele s kameroy v porshne)

PERIODICAL: Tr. Leningr. korablestroit. in-ta, 1954, Nr 14, pp 153-170

ABSTRACT: An experimental investigation of combustion chambers carved into the top of the piston of a slot-controlled uniflow two-stroke engine is outlined in the paper. The investigation was conducted on a one-cylinder engine (bore 65 mm, stroke 90 and 120 mm) with tapered-skirt pistons and with various alternate designs of the combustion chamber. The latter were formed in the shape of a spherical segment. According to the data obtained from the investigation, the use of the chambers in the pistons increases the power by 15-20% and simultaneously lowers the fuel consumption by 7-10%.

B.D. Zaloga

1. Combustion chambers--Performance 2. Pistons--Design

Card 1/1

POLYANSKIY, S.K., inzh.; BOLIYEV, Ch.B., inzh.; KOLMAKOV, V.M., inzh.;
LUYK, I.A., inzh.; LINETSKIY, G.I., inzh.; GORDEYEV, P.A.,
red.; BOROVNEV, N.K., tekhn. red.

[Album on the maintenance of the E-652 excavator] Al'bom
tekhnicheskogo obsluzhivaniia ekskavatora E-652. Moskva,
Gosstroizdat, 1963. 175 p. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut organizatsii i mekha-
nizatsii stroitel'nogo proizvodstva.
(Excavating machinery—Maintenance and repair)

GORDEYEV, P.A., inzh.

Automatic washing machine with a capacity of 50 kg (ASMTS-50).
Nov. tekhn. zhil.-khoz.: Blagoustr. gor. [no.1]:82-88 '61.
(MIRA 18:5)

BOGUSLAVSKIY, Boris L'vovich; GLINKIN, N.M., nauchnyy red.; GORDEYEV,
P.A., red.; KOZLOVSKAYA, M.D., tekhn. red.; PERSON, M.N.,
tekhn. red.

[Semiautomatic and automatic lathes and automatic lines] To-
karnye poluavtomaty, avtomaty i avtomatizirovannye linii.
Izd.3., perer. i dop. Moskva, Vses.uchebno-pedagog. izd-vo
Proftekhizdat, 1961. 599 p. (MIRA 15:4)
(Lathes) (Automation)

SUMIN, I.P., gornyy inzh.; GORDEYEV, P.A., gornyy inzh.; ZOL'NIKOV, V.V.,
gornyy inzh.

Studying the effect of the length of stemming on the degree
of fracturing of the rock massif by detonating borehole charges.
Vzryv. delo no.54/11:185-189 '64. (MIRA 17:9)

1. Bachatskiy ugol'nyy razrez tresta Belovugol'.

KOSENKO, I.S., kand. tekhn. nauk, nauchn. red.; GORDEYEV, P.A.,
red.; KASIMOV, D.Ya., tekhn. red.

[Mechanization and automatization of factories producing
precast reinforced concrete and the assembling of large-
panel buildings] Mekhanizatsiia i avtomatizatsiia na za-
vodakh sbornogo zhelezobetona i montazh krupnopanel'nykh
zdani. Moskva, Gosstroizdat, 1963. 82 p.

(MIRA 16:10)

1. Akademiya stroitel'stva i arkhitektury SSSR. TSentral'-
nyy institut nauchnoi informatsii po stroitel'stvu i ar-
khitecture.

(Buildings, Prefabricated) (Automation)
(Precast concrete)

MYSKOVA, N.M.; TOMA, O.F.; BECHKIN, K.P.; KHALEVSKAYA, S.I.;
GOL'SKAYA, I.F.; NEPOROZHNIY, P.S., red.; NOVITSKIY, L.M.,
nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG, T.M., tekhn.
red.

[Album of new construction equipment; recommended for use]
Al'bom novoi stroitel'noi tekhniki, rekomenduemoi k vnedre-
niiu. Moskva, Gosstroizdat. No.2. [Construction of power
engineering structures. Electrical engineering structures]
Energeticheskoe stroitel'stvo. Elektrotekhnicheskie raboty.
1963. 111 p. (MIRA 16:10)
(Power engineering) (Hydraulic structures)

AYDAROV, G.A., inzh.; BELYAYEV, B.I., inzh.; LEVIN, L.I., inzh.;
RYABOV, A.F., inzh.; SAKHNOVSKIY, M.M., kand. tekhn.
nauk; CHESNOKOV, A.S.; SHILOVTSEV, D.P.; GAY, A.F., kand.
tekhn.nauk, nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG,
T.M., tekhn. red.; RODIONOVA, V.M., tekhn. red.

[Manufacture of steel structures] Isgotovlenie stal'nykh
konstruktsii. Moskva, Gosstroizdat, 1963. 401 p.
(MIRA 16:8)

(Steel, Structural)

MAIICHOVSKIY, Rudol'f [Maličovský, Rudolf], inzh.; KHEVROLIN,
Ya.I [translator]; KLEDO, M.A., inzh. nauchn. red.;
GORDEYEV, P.A., red.

[Assembling structural elements of industrial buildings.
Abridged translation from the Czech] Montazh stroitel'-
nykh konstruktsii promyshlennykh sooruzhenii. Moskva,
Stroiizdat, 1964. 86 p. (MIRA 17:6)

GRINEVICH, Georgiy Petrovich; GRINEVICH, Georgiy Georgiyevich;
GEL'MAN, Aleksandr Samoylovich; KAZARINOV, V.M., kand.
tekhn. nauk, nauchn. red.; GORDEYEV, P.A., red.;
SHIROKOVA, G.M., red.

[Comprehensive mechanization of loading and unloading
work and transportation operations in construction] Kom-
pleksnaia mekhanizatsiia pogruzochno-razgruzochnykh ra-
bot i transportnykh operatsii v stroitel'stve. Moskva,
Stroiizdat, 1964. 363 p. (MIRA 17:6)

GORDON, P.A.

Present stage and development of high power two-stroke slow speed
naval diesel engines. Constr was 16 no. 71356-362 J1 '64.

GORDEYEV, P.I.

Geomorphological features of the right bank of the Northern Donetsk
Valley between Zmiyev and the mouth of the Bakhmut River. Uch.zap.
KHGU 56:125-135 '55. (MLRA 9:7)
(Donetsk Valley--Physical Geography)

GORDEYEV, P.I. 12-90-2-6/30

AUTHORS: Vilenkin, V.L.; Gordeyev, P.I. and Demchenko, M.A.

TITLE: In Memory of Nikolay Izmaylovich Dmitriyev (Pamyati Nikolaya Izmaylovicha Dmitriyeva) 1886-1957

PERIODICAL: Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva, 1958, Vol 90, Nr 2, pp 150 - 152 (USSR)

ABSTRACT: Biographical information is presented on Professor Nikolay Izmaylovich Dmitriyev, who, during his lifetime, held the Chair of Regional Physical Geography at Khar'kov University. There is 1 photograph.

AVAILABLE: Library of Congress

Card 1/1 1. Biography

GORDEYEV, P.P.

Automatic device for visual sorting of defective bottles containing
a liquid. Spirt. prom. 25 no.7:34-35 '59. (MIRA 13:2)
(Liquor industry--Equipment and supplies)

GORDEYEV, P.V.

Study of possible forestry tracts with the aid of axonometric aerial
photography. Les.prom. 14 no.6:4-9 Je '54. (MIRA 7:6)
(Forests and forestry) (Photography, Aerial)

GORDEYEV, P.V.

Calculating lenticular fresh and saline water reserves in Chernozem
soil areas. Trudy NPI 103:53-59 '59. (MIRA 13:9)
(Water, Underground)

POSOKHOV, Ye.V.; GORDEYEV, P.V.

Chemistry of underground waters of Chernyye Zemli. Trudy NPI
128:85-95 '62. (MIRA 15:9)
(Chernyye Zemli—Water, Underground—Composition)

GORDEYEV, P.V.

Sources of the formation of the lenses of fresh and brackish waters
in the "Black Lands." Trudy NPI 156:53-60 '64.

Water supply of the "Black Lands" and prospects for its improvement.
Ibid.:61-72 (MIRA 18:7)

BARANOV, B.K.; GORDEYEV, R.I.

Semiconductor rectifiers for the experimental models of the
N62 electric locomotive. Sbor. nauch. trud. EINII 2:60-71 '62.
(MIRA 16:8)

(Electric locomotives)
(Electric current rectifiers)

TIMURDZHI, V.G.; LOBANOVA, L.S.; MUSATOV, I.Kh.; GORDEYEV, R.I.

Dynamic voltampere characteristics of silicon power rectifiers.
Sbor. nauch. trud. Elnii 3:142-150 '63. (MIRA 17:4)

SOV/91-58-2-5/31

AUTHORS: Gordeyev, S.D., Technician, and Shirokshin, Ye.A., Engineer

TITLE: On the Automatic Switch-Off of the Turbine from the Steam Duct if Water is Spattered Into it (Avtomaticheskoye otklyucheniye turbiny ot paroprovoda pri zabrose v nego vody)

PERIODICAL: Energetik, 1958, Nr 2, p 10 (USSR)

ABSTRACT: If water is spattered into the turbine, the steam-pass section of the turbine gets damaged. A new automatic device aimed at preventing this, has been installed at the mobile power station Nr 45. The new automatic device works on the basis of the electroconductivity of the boiler water. The possibility of spurious operation of the new system is eliminated by means of a screen-cover installed above the contacts' plug. The

Card 1/2

SOV/91-58-2-5/31

On the Automatic Switch-Off of the Turbine from the Steam Duct
if Water is Spattered Into it

editor remarks that water spattering is
almost eliminated in the new type boilers.
Occasionally, spattered water evaporates
in the steam duct. There is 1 schematic
diagram.

Card 2/2

GORDEYEV, Semen Osipovich; KOZLOVSKIY, B.A., red.; DOLGOVA, K.N.,
red. izd-va; LELYUKHIN, A.A., tekhn. red.

[Asphalt-concrete work] Asfal'tobetonnye raboty. Moskva,
Izd-vo M-va kommun.khoz. RSFSR, 1962. 225 p. (MIRA 15:10)
(Asphalt concrete) (Pavements)

GORDEYEV, Semen Osipovich. Prinimal uchastiye KOZLOVSKIY, B.A.,
kand. tekhn. nauk; SUKHAROVA, E.S., red.izd-va; KHENOKH,
F.M., tekhn. red.

[Deformations and defects of asphalt concrete pavements]
Deformatsii i povrezhdeniia dorozhnykh asfal'tobetonnykh
pokrytii. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 131 p.
(MIRA 17:3)

GORDEYEV, Semen Osipovich

[Asphalt concrete work] Asfal'tobetonnye raboty. 1 ed. 2.
Moskva, Stroiizdat, 1964. 205 p. (MIRA 17:11)

GORDEYEV, S.V.; DAYKER, A.I.

Role of the preheating flame in the oxygen cutting process.

[Sbor. trud.] Nauch.-issl.inst.met. no.4:128-134 '61.

(MIRA 15:11)

(Gas welding and cutting)

TIMOFEYEV, V. N.; SHKLYAR, F. R.; PALTUSOVA, K. I.; Prinimali uchastiye:
PAKHALUYEV, K. M., inzh.; IZMAYLOV, O. A., inzh.; DHUSOVITIN,
A. M., inzh.; GOREYEV, S. V., inzh.; RUZHENTSEVA, T. M.,
laborant; GERASIMOV, G. I., laborant

Aerodynamics of blast furnace air preheaters. Sbor. nauch.
trud. VNIIMT no.8:302-347 '62. (MIRA 16:1)

(Blast furnaces)

(Air preheaters--Aerodynamics)

EACHURIN, N.I., inzh.; GORDEYEV, S.V., inzh.

Standardization and normal series of the principal parameters
of high-voltage current transformers. Elektrotehnika 34 no.9:
60-65 S '63. (MIRA 16:11)

MUSHEGYAN, S.A.; GORDEYEV, S.V.; MARTYNOV, L.N.; SYPER, N.A.

AIK-R^D-62 apparatus and its use in the oncological clinic.
Vop. onk. 11 no.9:75-79 '65. (MIRA 18:9)

1. Iz Nauchno-issledovatel'skogo instituta eksperimental'noy
khirurgicheskoy apparatury i instrumentov (dir. - zasluzhennyy
vrach RSFSR M.G.Anan'yev).

GORDEYEV, V.; GRINBERG, M.

Method of preparing engineering calculations for mechanized
execution. Vych. i org.tekh. v stroi. i proek. no.1:62-73 '64.
(MIRA 18:10)

1. Gosudarstvennyy proyektnyy institut Ukrproyektstal'-konstruktsiya.

GORDEYEV, Vasil'y Aleksandrovich

(Leningrad Textile Inst imeni Kirov), Academic degree of Doctor of Technical Sciences, based on his defense, 7 April 1955, in the Council of the Moscow Textile Inst, of his dissertation: "Research on the workings of machinery for loosening and tightening of frames of weaving looms."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 17, 9 July 1955, Byulleten' MVO SSR, No. 17, Sept 1956, Moscow, pp 9-16, Uncl. JPRS/NY-435

GORDEYEV, Vasil'y Aleksandrovich; NEZHIEL'SKAYA, A.I., retsenzent;
ARKHANGEL'SKIY, S.S., redaktor; EL'XINA, E.M., tekhnicheskij
redaktor.

[Construction and maintenance of the AT-100 automatic loom]
Ustroistvo i obsluzhivanie avtomaticheskogo tkatskogo stanka
AT-100. Izd.2-oe, ispr. i dop. Moskva, Gos.nauchno-tekhn.
izd-vo Ministerstva promysh.tovarov shirokogo potrebleniia
SSSR, 1955. 170 p. (MLRA 8:11)
(Looms)

GORDYEV, V. H.

4

2542
GORDYEV, V. H.

The investigation of the elastic properties of textile materials under dynamic strain by a vibration method (in Russian). "Tekstil. prom-st" no. 1. 37-41, 1953. Rev. an. 1818, Ref. Zh, Matb. 1956.

HERE
2 MAY

An apparatus is described for testing the elastic properties of cotton yarns, glass filaments, and woolen yarns, founded on the principle of measuring the vertical vibrations of a weight suspended on the test thread.

Test methods are described and experimental results presented. For all materials excepting glass filaments, the value of the coefficient of elasticity determined by this dynamic method is found to be considerably higher than found by the static test.

Courtesy of Referativnyi Zhurnal A. V. Matukonis, USSR
Translation, courtesy Ministry of Supply, England

MT

GORDEYEV, V. A.

GORDEYEV, V. A. kandidat tekhnicheskikh nauk

Computing the elasticity coefficient for loom preparation systems.
Tr. st. prom. 15 no. 5: 26-29 May '55. (H: 21 3: 6)
(10000)

GORDIYEV, Vasilii Aleksandrovich, prof.; VOLKOV, Pavel Vasil'yevich,
doksant; MARKOV, N.P., retsenzent; BLYUYER, V.A., retsenzent;
GORITSKIY, S.G., retsenzent; KULIGIN, A.V., retsenzent; SEGAL',
N.M., red.; MEDVEDEV, L.Ya., tekhn.red.

[Weaving] Tkachestvo. Moskva, Gos.nauchno-tekhn.isd-vo lit-ry
po legkoi promyshl., 1958. 550 p. (MIRA 12:3)
(Weaving)

BASHKIROV, Matvey Viktorovich; GORDEYEV, V.A., retsenzents; ARKHANGEL'SKIY,
S.S., red. [deceased]; SOKOLOVA, V.Ye., red.; KNAKNIN, M.T.,
tekhn.red.

[Theory and practice of knotting various fibrous materials]
Voprosy teorii i praktiki soedineniia nitel razlichnykh
voloknistykh materialov. Moskva, Gos.nauchno-tekhn.izd-vo
lit-ry po legkoi promyshl., 1959. 223 p. (MIRA 13:1)
(Knots and splices) (Textile machinery)

GORINYEYEV, V.A.

Investigating the cyclic deformation in flexible loom filling
systems. Izv. vys. ucheb. zav.; tekhn. tekst. prom. no.3:103-111
'59. (MIRA 12:11)

Leningradskiy tekstil'nyy institut im. S.M. Kirova.
(Looms)

GORDEYEV, V.A.

Determining the components and the total cyclic deformation
of the feeler filling system of looms. Izv.vys.ucheb.zav.;
tekhn.tekst.prom. no.4:105-114 '59. (MIRA 12:11)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Looms)

GORDEYEV, V.A.; SIMAKIN, V.V., retsenzant; ORLOVA, L.A., red.;
SHAPENKOVA, T.A., tekhn.red.

[Design and operation of automatic looms] Ustroistvo i obslu-
zhivanie avtomaticheskikh tkatskikh stankov. Moskva, Izd-vo
nauchno-tekhn.lit-ry RSFSR, 1960. 182 p.

(MIRA 14:3)

(Looms)

GORDEYEV, V.A.

Precision of the performance of the friction let-off motion. Izv.
vys.ucheb.zav.; tekhn.tekhn.prom. no.6:92-101 '60. (MIRA 14:1)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Looms)

GORDEYEV, Vasil'y Aleksandrovich; NEKRASOV, Konstantin Pavlovich;
VOLKOV, Pavel Vasil'yevich; SIMAKIN, V.V., retsenzent; SOKOLOV,
A.F., spets. red.; SIDOROV, Yu.P., spets. red; AKSENOVA, I.I.,
red.; VINOGRADOVA, G.A., tekhn. red.

[Cotton weaving] Khlopokotkachestvo. Moskva, Izd-vo nauchno-
tekhn. lit-ry RSFSR, 1961. 517 p. (MIRA 15:1)
(Cotton weaving) (Looms)

35937

S/024/62/000/001/008/013
E140/E435

16.8000 (4102,4202)

AUTHOR: Gordeyev, V. A. (Leningrad)

TITLE: Self-adjusting system design principle

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Energetika i avtomatika.
no.1, 1962, 152-157

TEXT: The author considers the problem of quality index and design principles for self-adjusting systems with rapid variation of the basic loop. In the present context "rapid" is a change such that it cannot be neglected during the duration of the transient process in the basic loop. The study relates specifically to a system in which the basic loop has the transfer characteristic of a simple tuned circuit. The method proposed is to compare the amplitudes of successive half cycles of the oscillatory process and to adjust the circuit damping so as to maintain, in one case, unity ratio, thus stabilizing the operation at the limit of stability or, in the general case, constant ratio, thus providing damping of oscillatory processes arising as a result of random variations of the system parameters. In this case, however, the problem arises of finding the appropriate

Card 1/2

24.4/00

39060

S/024/62/000/003/003/011
E140/E463

AUTHOR: Gordeyev, V.A. (Leningrad)

TITLE: The dynamics of self-adjusting systems with rapidly varying parameters

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.3, 1962, 122-131

TEXT: The usual quality criteria of self-adjusting systems take an appreciable time to calculate and can therefore be used only for systems with slowly varying parameters, i.e. parameters which practically do not change during the time for calculation of the quality criterion. The author considers here systems of the type

$$\varphi(\lambda)(\lambda^3 + A_1\lambda^2 + A_2\lambda + A_3) = 0 \quad (1)$$

where the nearest roots to the imaginary axis are a pair of complex roots. The real root is sufficiently far from the axis so that the free motion of the system is determined by the complex pair. The system can be approximated by a third order system with variable coefficients A_i . The mode of operation considered is one with the system close to the boundary of stability. Here Card 1/3

S/024/62/000/003/003/011

E140/E463

The dynamics of self-adjusting ...

Eq.(1) takes the form

$$(\lambda + \alpha)(\lambda^2 + \beta^2) = 0 \quad (2)$$

with

$$\alpha = A_1, \quad \beta = \sqrt{A_2}$$

The self-adjusting system alters the values of the A_i if the system leaves the boundary of stability. Eq.(1) is expanded in a Taylor series about any one root in powers of that root and only the linear term is retained, yielding an expression

$$\delta_i = \lambda_i - \lambda_i^0 = \frac{F(\lambda_i^0)}{\left. \frac{\partial F(\lambda)}{\partial \lambda} \right|_{\lambda = \lambda_i^0}} \quad (3)$$

where F is the characteristic equation of the system. This permits expressions to be found describing the effects on the stability of varying any given A_i . The quality criterion employed is based on the ratio of peak amplitudes over a period of oscillation. Necessary and sufficient conditions are determined
Card 2/3

GORDEYEV, V.A.; BRUSNIKINA, L.L.

Comparing the efficiency of continuous and intermittent warping
in cases of an optimum set of bobbins. Izv.vys.ucheb.zav.;
tekh.tekst.prom. no.6:11-17 '62. (MIRA 16:2)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Warping machines) (Time study)

GORDEYEV, Vasil'y Aleksandrovich; ROZANOV, F.M., retsenzent;
AKSENOVA, I.I., red.; BATYREVA, G.G., tekhn. red.

[Collection of problems on weaving] Sbornik zadach po
tkachestvu. Moskva, Gizlegprom. 1963. 180 p.
(MIRA 16:9)

(Weaving)

ZOTIKOV, Vladimir Yevgen'yevich, doktor tekhn, nauk, prof.; BUDNIKOV,
Ivan Vasil'yevich; TYKOV, Petr Pavlovich; GORDEYEV,
Vasiliy Aleksandrovich; DALIDOVICH, Aleksandr Semenovich;
CHUGREYEVA, V.N., red.; BATYREVA, G.G., tekhn. red.

[Equipment and technology for the processing of fibrous
materials] Mekhanicheskaya tekhnologiya voloknistykh mate-
rialov. Moskva, Gislepprom, 1963. 638 p. (MIRA 16:9)
(Textile industry) (Textile machinery)

S/280/63/000/001/013/016
E140/E435

AUTHOR: Gordeyev, V.A. (Leningrad)

TITLE: Quality criteria in adaptive systems

PERIODICAL: Akademiya nauk SSSR, Izvestiya. Otdeleniye
tekhnicheskikh nauk. Tekhnicheskaya kibernetika.
no.1, 1963, 121-129

TEXT: The method of the auxiliary operator is applied to the determination of the components of the system gradient in an adaptive control system. The method is claimed to be superior to that of G.W.Anderson et al (IRE National Convention Record, pt.4, 1958) in the speed of response and absence of test signals perturbing the process. The disadvantages of the system are 1) it places the control system on the oscillatory boundary of stability, which is inadmissible for certain processes, 2) it is necessary to determine the component corresponding to the two roots nearest the imaginary axis and 3) it is only possible to adjust a single parameter. See also the paper on adaptive systems with gradient search (same journal and issue, pp.113-120). There are 5 figures.

Card 1/1 SUBMITTED: June 23, 1961

GORDEYEV, V.A.; KULIKOVA, N.A.

Studying the elastic properties of textiles under the conditions of short-time deformations. Izv. vys. ucheb. zav.;
tekh. tekst. prom. no.4:8-11 '63. (MIRA 16:11)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.

GORDEYEV, V.A., doktor tekhn. nauk, prof.

Calculating the warp tension on a loom with a planetary warp
regulator. Tekst. prom. 23 no.6:35-38 Je '63.

(MIRA 16:7)

1. Zaveduyushchiy kafedroy tkachestva Leningradskogo tekstil'-
nogo instituta imeni Kirova.

(Looms)

GORDEYEV, V.A., doktor tekhn. nauk, prof.

Effect of the relative values of the rigidity coefficient of the elements of the loom elastic filling system on the magnitude of the cloth fell distance. Tekst. prom. 24 no.10:47-50 O '64. (MIRA 17:12)

1. Zaveduyushchiy kafedroy tkachestva Leningradskogo instituta tekstil'noy i legkoy promyshlennosti imeni Kirova.

GORDEYEV, Vasilii Aleksandrovich; GOR'KOV, V.K., kand. tekhn. nauk, retsenzent; ISAKOV, N.P., kand. tekhn. nauk, retsenzent; SIDOROV, Yu.P., kand. tekhn. nauk, retsenzent; AGADZHANOVA, I.A., red.;

[Dynamics of the mechanisms for warp releasing and tensioning in looms] Dinamika mekhanizmov otpuska i natiazheniia osnovy tkatskikh stankov. Moskva, Legkaia industriia, 1965. 223 p. (MIRA 18:10)

1. GORDEYEV, V.D.
2. USSR (600)
4. Gordeyev, V.D.
7. On the pamphlet "Symmetric trawl and its construction" by V.D. Gordeyev, Reviewed by Ye.Yu. Manner, Ryb.khoz. 29 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

GORDEYEV, V. D. Cand. Tech. Sci.

Dissertation: "Trawling Technique in the Far East." Moscow Technical Inst of Fish
Industry and Economy imeni A. I. Mikoyan, 21 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

GORDEYEV, V. D.

Gordeyev, V. D. - "The status and future of the trawling industry in the Far East",
'zvestiya Tikhookean.' nauch.-issled. in-ta ryb. khoz-va i okeanografii, Vol. XXIX,
1949, p. 3-33, - Bibliog: 49 items.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

^Y
GORDEEV, V. G.

Prevention and therapy of the cancer of skin and mucous membrane by the use of
Gordeev liquid Moskva, Medgiz, 1953. 141 p.

BOEDTICH, V. G. ; GRUDOVANTS, M. G.

"New Material on Treatment of Tuberculous Afflictions of the Skin."

Vestnik venerologii i dermatologii (Bulletin of Venerology Dermatology),
No 1, January-February 1954, (Biomper), Moscow.

BESSEKERSKIY, Viktor Antonovich; VOSTOKOV, Sergey Borisovich; TSEYTLIN,
Yakov Moiseyevich; GORDEYEV, V.G., kand. tekhn. nauk, retsenzent;
FABRIKANT, Ye.A., nauchn. red.; LESKOVA, L.R., red.

[Electromechanical smoothing devices] Elektromekhanicheskie
sglazhivaiushchie ustroistva. Leningrad, "Sudostroenie,"
1964. 145 p. (MIRA 17:5)

GORDEYEV, V.I.

Surgical treatment of cardiospasm. Khirurgia no.6:12-15 Je '61.
(MIRA 14:11)

1. Iz khirurgicheskogo otdeleniya (zav. V.I. Gordeyev) Khir-
sonskogo oblastnogo onkologicheskogo dispansera (glavnyy vrach
P.K. Sapozhnikov).

(CARDIOSPASM)

GORDEYEV, V.I.

Presternal plastic surgery of the esophagus using the stomach.
Nov.khir.arkh. no.4:67 '62. (MIRA 15:5)

1. Khirurgicheskoye otdeleniye Khersonskogo oblastnogo onkologicheskogo dispansera.
(ESOPHAGUS--CANCER) (STOMACH--SURGERY)

GORDEYEV, V. I.

Surgical treatment of cancer of the pancreas. Vop. onk. 8 no.4:
91-94 '62. (MIRA 15:4)

1. Iz khirurgicheskogo otdeleniya (zav. - V. I. Gordeyev)
Khersonskogo onkologicheskogo dispansera (glav. vrach - V. I.
Gordeyev)

(PANCREAS—CANCER)

L 27495-66

ACC NR: AP6015607

SOURCE CODE: UR/0020/66/168/002/0310/0313

AUTHOR: Adirovich, E. I. (Academician AN UzSSR); Gordeyev, V. I. 33
B

ORG: Physicotechnical Institute, Academy of Sciences UzSSR (Fiziko-tekhnicheskiy institut Akademii nauk UzSSR)

TITLE: Investigation of a regenerative optron with optical feedback

SOURCE: AN SSSR. Doklady, v. 168, no. 2, 1966, 310-313

TOPIC TAGS: light emission, photoresistor, trigger circuit

ABSTRACT: Conditions under which an opto-electronic cell with positive optical feedback provides a bistable volt-ampere characteristic are analytically investigated. An experimental optron was constructed using a GaP-photodiode and a CdS photoresistor. The components were well matched by spectrum and were operated in the vicinity of $\lambda_{\max} = 0.6\mu$. Optical coupling between the photodiode and the photoresistor was by direct illumination, without the use of fiber optics. The experimental volt-ampere characteristic of the device had a clearly expressed trigger-type character. Orig. art. has: 4 figures and 14 formulas. [GS]

SUB CODE: 09/ SUBM DATE: 28Jan66/ OTH REF: 006/ ATD PRESS: 4260

Card 1/1 BKG

UDC: 539.293:535.215+621.382.001.24

AVILOV-KARNAUKHOV, B.N.; BOGUSH, A.G.; GIKIS, A.F.; DROZDOV, A.D.;
MALOV, D.I.; SINEL'NIKOV, Ye.M.; BRUSENTOV, L.V.; DENISOV, A.A.;
PAL'SHAU, M.V.; POLYAKOV, F.I.; CHERNYAVSKIY, F.I.; BUROK, V.S.;
GORDEYEV, V.I.; KAZHDAN, A.E.; KOVALEV, V.Ye.; KURENNYY, E.G.;
POTAPENKO, V.Ya.

Professor Georgii Mikhailovich Kaialov, 1905- ; on his 60th
birthday and the 37th anniversary of his theoretical and educa-
tional work. Izv. vys. ucheb. zav.; elektromekh. 8 no.10:1181-
1182 '65. (MIRA 18:11)

GORDIYEV, V.K.

Symposium of the Scientific Results of the
Expedition on Board the "CHELYUSKIN" and in the
camp of SEMIDT, Leningrad, 1938.

L 23216-66 EWT(d)/EWP(k)/EWP(1)
ACC NR: AP6013582

SOURCE CODE: UR/0144/65/000/010/1181/1182

AUTHOR: Avilov-Karnaukhov, B. N.; Bogush, A. G.; Gikis, A. F.; Drozdov, A. D.;
Malov, D. I.; Sinel'nikov, Ye. M.; Brusentsov, L. V.; Denisov, A. A.; Pal'shau, M. V.;
Polyakov, B. A.; Chernyavskiy, F. I.; Burok, V. S.; Gordeyev, V. I.; Kazhdan, A. E.;
Kovalev, V. Ye.; Kurennyy, E. G.; Potapenko, V. Ya.

ORG: none

TITLE: Professor G. M. Kayalov on the occasion of his 60th birthday and 37 years of
pedagogical activities

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 10, 1965,
1181-1182

TOPIC TAGS: electric engineering personnel, academic personnel

ABSTRACT: Doctor of Engineering Sciences, Professor of RIIZhT
Rostovskiy institut inzhenerov zheleznodorozhnogo transporta;
Rostov Institute of Railroad Engineers, Georgiy Mikhaylovich
KAYALOV was born on 26 September 60 years ago. He began his
working career as a standby electrical construction worker at the
Novorossiysk cement factory. In 1929 he graduated from the
Novocherkassk Polytechnical Institute, and between 1928 and 1947
worked in the designing section of the "Elektroprom" trust. Sub-

Cord 1/2

L 23216-66

ACC NR: AP6013582

sequently, he joined the Rostov department of the GPI /Gosudarstvennyy proyektnyy institut; State Designing Institute/ "Tyazhpromelektro-proyekt" where he advanced from a technician of the designing department to its chief engineer. From 1933 to 1962 he was docent of the department of electrification of industrial enterprises of the NPI /Novocherkasskiy politekhnicheskii institut imeni Sergo Ordzhonikidze; Novocherkassk Politechnic Institute im. Sergo Ordzhonikidze/; he taught as professor until 1965 and presently is a professor of the RIIZhT. He published more than 70 scientific works, including studies of flywheel-containing electric motors, investigations of electrical loads of industrial enterprises, analyses of basic features of real load graphs, (including their probabilistic modeling), proposals for peak load calculation methods (based on the theory of mass servicing) and developments of methods for the calculation of extremal loads of heavy consumers, for the study of random graphs of reactive loads, for the evaluation of electric load fluctuations, and the like. G. M. KAYALOV was also active in the Party, professional, and scientific organizations. He is a holder of the "For Outstanding Work During the Great Patriotic War of 1941-1945 gg." medal and the "Badge of Honor"

decoration. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09, 05 / SUBM DATE: none

Card 2/2 **28**

24380

S/142/60/005/005/007/015
E192/E382

7.2580 (1040, 1159)

AUTHOR: Gordeyev, V.K.

TITLE: Determination of the Shape of the Pulses From a
Generator Based on a Secondary Emission Tube

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiotekhnika, 1960, Vol. 3, No. 5, pp. 491-496

TEXT: Pulse-generators based on secondary emission tubes are
of considerable importance and the theoretical calculation
of the shape of the pulses produced by these devices is of
interest. A simplified diagram of a pulse-generator of this
type is shown in Fig. 1. For the purpose of analysis it is
assumed that the parasitic capacitance between the grid and
the cathode can be neglected, while the grid-dynode inter-
electrode capacitance can be added to the coupling capacitance
C. The equations for the system can therefore be written as:

Card 1/10

Determination of

S/142/60/003/005/007/015
E192/E382

$$\begin{cases} I_d - I_c = \frac{U_d}{R_d} + C_d \frac{dU_d}{dt}; \\ I_c = \frac{U_d}{R_d}; \\ I_c = C \left(\frac{dU_d}{dt} - \frac{dU_g}{dt} \right). \end{cases} \quad (1).$$

The dynode current in these equations is dependent on the voltage at the control grid U_g and the dynode voltage U_d , assuming that the voltages at the remaining electrodes are constant. Eqs. (1) are therefore nonlinear and for the purpose of analysis it is assumed that from time $t = 0$ to the instant t_1 the dynode current is solely dependent on the grid voltage, i.e. $I_d = S U_g$ (see Figs. 2). From the instant t_1 at which $U_d = U_{d1}$ until the instant t_2 it can

Card 2/10

Eq (1) on page 491 attached to Net 38

24380

Determination of

S/142/60/003/005/007/015
E192/E382

be assumed that the dynode current is dependent on the dynode voltage and follows:

$$I_d = S_1 (U_{dm} - U_d) \quad (2)$$

where U_{dm} is the value of the dynode voltage at which the dynode current changes its sign and

$$S_1 = \frac{SU_{d1}}{U_{dm} - U_{d1}} \quad (3)$$

The dependence of the dynode current on the dynode voltage can be approximately represented as shown in Fig. 2. Eqs. (1) can be written as a single differential equation and for the interval from $t = 0$ to $t = t_1$ the equation is

Card 5/10

Eqs. (4), (5), (6) and (7) on page 492

Determination of

24380
S/142/60/003/005/007/015
E192/E382

attached to Mat 38.

$$\frac{d^2 U_d}{dt^2} + \left(\frac{1}{R_g C_d} + \frac{1}{R_d C_d} + \frac{1}{R_g C} - \frac{S}{C_d} \right) \frac{dU_g}{dt} + \frac{1}{R_d C_d R_g C} U_g = 0. \quad (4)$$

By introducing the notation of

$$\tau_{11} = R_d C_d; \tau_{20} = R_d C; \tau_{21} = R_d C_d; \nu = \frac{S}{C_d}, \quad (5)$$

Eq. (4) can be written as:

$$\frac{dU_d}{dt^2} + \left(\frac{1}{\tau_{11}} + \frac{1}{\tau_{20}} + \frac{1}{\tau_{21}} - \nu \right) \frac{dU_d}{dt} + \frac{1}{\tau_{11} \tau_{20}} U_d = 0. \quad (6)$$

and its solution is in the form

$$U_d = A_1 e^{p_1 t} + A_2 e^{p_2 t}, \quad (7)$$

Card 4/10

24380

S/142/60/005/007/015
E192/E382

Determination of

where p_1 and p_2 are the roots of the characteristic equation and A_1 and A_2 are constants which can be determined from the initial conditions. From Eq. (8) it is easy to determine the self-excitation conditions for the system. The differential equation for the interval $t_1 \leq t \leq t_2$, where t_2 is the instant when the grid voltage reaches the value $U_{d2} = U_{d1}$, is:

$$\frac{d^2 U_d}{dt^2} + \left(\frac{1}{R_d C_d} + \frac{1}{R_d C} + \frac{1}{R_d C_d} + \frac{S_1}{C_d} \right) \frac{dU_d}{dt} + \frac{1}{R_d C} \left(\frac{1}{R_d C_d} + \frac{S_1}{C_d} \right) U_d = \frac{S_1 U_{dm}}{R_d C_d C} \quad (11)$$

By following the notation of Eq. (5) and:

$$S_1 / C_d = \nu_1 \quad (12)$$

it is found that the solution of Eq. (11) is:

Card 5/10

24380

Determination of

S/142/60/003/005/007/015
E192/E382

$$\frac{d^2 U_d}{dt^2} + \left(\frac{1}{\tau_{n1}} + \frac{1}{\tau_{n2}} + \frac{1}{\tau_{n3}} + \nu_1 \right) \frac{dU_d}{dt} + \frac{1}{\tau_{n0}} \left(\frac{1}{\tau_{n1}} + \nu_1 \right) U_d = \frac{\nu_1}{\tau_{n0}} U_{d_m} \quad (15)$$

where p_1 and p_2 are the roots of the characteristic equation and A_1 and A_2 are two constants which can be determined from the initial conditions. From the instants t_1 , the voltage at the grid decreases to the value $U_{d1} = U_{d2}$ and the voltage at the dynode increases to U_{d2} . Commencing from the instant t_2 , the decrease of the voltage at the grid continues; simultaneously, the dynode ^{current} becomes dependent on the dynode and grid voltages. From the instant t_2 until the instant t_3 , it can be assumed that the dynode current is given by $I_d = S_2 U_d$, where:

Card 6/10

24380

Determination of

S/142/60/003/005/007/015
E192/E382

$$S_2 = S_1 \frac{U_{dm} - U_{d2}}{U_{d2}} \quad (19) .$$

The differential equation describing the behaviour of the system from the instant t_2 is similar to Eq. (4), except that S is replaced by S_2 . The above formulae were used to calculate the shape of the pulses for a generator having the following parameters: $S = 20 \text{ mA/V}$, $U_{d1} = 20 \text{ V}$, $C_d = 20 \text{ pF}$, $R_d = 2 \text{ k}\Omega$ (abatractor's note: probably R_g), $R_d = 200 \Omega$, $C = 100 \text{ pF}$ or $C = 20 \text{ pF}$, $U_{d0} = 1 \text{ V}$ and $U_{dc} = 0 \text{ V}$ (r).

The shape of the pulses is illustrated in Figs. 3, where the upper figure represents the grid voltage and the lower figure shows the dynode voltage; Curves 1 are for the case of

Card 7/10

24380

Determination of

S/142/60/003/005/007/015
E192/E382

$C = 20$ pF, while Curves 2 are for $C = 100$ pF. The above analysis should be more accurate than that given in the work of G. Narud (Ref. 1 - IRE National Convention Record, 1957, No. 5, 103), where the finite value of the coupling capacitance was not taken into account.

(Abstractor's note: in many of the equations there seems to be confusion between the grid voltage U_g and the dynode voltage U_d .)

There are 3 figures and 1 non-Soviet reference.

ASSOCIATION: TsNII Gos. Komiteta Soveta Ministrov SSSR
po radioelektronike (Central Scientific
Research Institute of the State Committee of
the Council of Ministers of the USSR for
Radio-electronics)

SUBMITTED: May 15, 1959 to the journal NDVSh
February 4, 1960 to the editor of this journal.

Card 8/10

KHARCHENKO, V.F., inzh.; GORDEYEV, V.K., inzh.; SYSOYEV, T.I., inzh.;
KHIGER, M.G., inzh.

Erection of heavy towers for electric transmission lines in
close quarters. Mont. i spets. rab. v stroi. 24 no.2:9-10
F '62. (MIRA 15:6)

1. Rostovskiy Gosudarstvennyy institut po proyektirovaniyu,
issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov
i trest Yuzhstal'konstruktsiya.
(Electric lines--Poles and towers)

S/879/62/000/000/067/088
D234/D308

AUTHOR: Gordeyev, V. N. (Kiev)

TITLE: Design of a suspended roof for certain types of load

SOURCE: Teoriya plastin i obolochek: trudy II Vsesoyuznoy konfe-
rentsii, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo
AN USSR, 1962, 382-386

TEXT: The author considers a shallow shell fastened to a rectan-
gular frame, with the equation of the surface

$$z = \frac{4f}{a^2} x^2 - \frac{4f}{b^2} y^2 \quad (1.1)$$

The shell consists of two families of threads whose projections on
the frame plane are straight lines. The cosine of the inclination
angle at any point of the shell is taken to be equal to 1, hori-

Card 1/3

S/879/62/090/000/067/039
D234/D308

Design of a suspended ...

horizontal displacements and relative elongations are neglected. Equations of static design for a vertical load are formulated: their linear parts can only be solved if the load can be represented by

$$q = q_{av} + q_x(y) + q_y(x) \quad (2.9)$$

the solution being

$$h_x = - \frac{8f_x E_x F_x}{\alpha^2} \left[\frac{q_{av}}{G} + \frac{q_x(y)}{G_x} \right] \quad (2.13)$$

$$h_y = \frac{8f_y E_y F_y}{b^2} \left[\frac{q_{av}}{G} + \frac{q_y(x)}{G_y} \right] \quad (2.14)$$

Card 2/3

Design of a suspended ...

S/879/62/000/000/067/088
D234/D308

$$G = G_x + G_y$$

(2.12)

A method of improving these solutions by taking into account the edge effect (for h_y only) is indicated. There are 2 figures.

Card 3/3

GORDIJEV, V. N. [Hordielev, V. M.] (Kiyev)

Equations for the calculation of textile-fabric shells. Prykl.
mekh. 8 no.6:613-618 '62. (MIRA 15:10)

1. Kiyevskiy avtodorozhnyy institut.

(Tents)

GORDEYEV, V. N.

Some results of studying systems of three-dimensional electro-
hydraulic drive with an air and oil accumulator. Nauch.sob.
IGD 22:184-195 '63. (MIRA 17:5)

GORDEYEV, V.N. [Hordielev, V.M.] (Kiyev)

Calculation of nets. Prykl.mekh. 9 no.5:570-572 '63.

(MIRA 16:10)

1. Kiyevskiy avtodorozhnyy institut.

GORDEYEV, V.N.

Labor-consuming character of the search for and correction of errors
in calculations. Vych. i org.tekh. v stroi. i projekt. no.2:65-66 '64.
(MIRA 18:10)

1. Gosudarstvennyy proyektayy institut Ukrproyektstal'konstruktsiya.

GERASIMENKO, P.S., inzhener: GORDEYEV, V.P., inzhener.

Apparatus for controlling the electric heating process. Mekh.trud.rab. 7
no.5:45 Ky '53. (MLRA 6:5)
(Electric heating)

GORDEYEV, V.P., gornyy inzh.; LOMONOSOV, G.G., gornyy inzh.

Multiple-row short-delay blasting in open-pit mines of the
Noril'sk Mining and Metallurgical Combine. Gor. zhur. no. 1:46-
48 Ja '61. (MIRA 14:1)

1. Noril'skiy gorno-metallurgicheskiy kombinat.
(Noril'sk--Strip mining) (Blasting)

BULASHEVICH, G.A., gornyy inzhener; GORDEYEV, V.P., gornyy inzhener;
PERMYAKOV, V.M., gornyy inzhener

Improving boring and blasting operations in strip mines of the
Noril'sk Combine. Vzryv. delo no.47/4:63-73 '61. (MIRA 15:2)

1. Gornometallurgicheskiy opytно-issledovatel'skiy tsekh Noril'skogo
kombinata.

(Noril'sk region--Blasting) (Boring)

GORDEYEV, V.Ye.; KOMOV, V.F.; SERBINOV, A.I.; TROSHIN, Ya.K.

Explosions in piston-type air compressors and main lines.
Prom. energ. 19 no.12:24-29 D 1964.

(MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR.

L 31754-65

ACCESSION NR: AP5006856

ation could be sustained in another section of the tube coated with a ...
film ...
were identical for the machine oils and the brightstock and ...
Orig art. has: 1 figure and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTER: ...

ENVY: ...

NO RUF SOV: 002

OTHER: 001

Card 1/2

L 9545-66 FSS-2/EWT(1)/EWP(m)/EWT(m)/ENR(1)/T/FCS(k)/EWA(o)/ETC(n)/EWA(1)
 ACC NR: AP5026062 RPL WW/JW/WE/RM SOURCE CODE: UR/0405/65/000/002/0012/0021

55 55 55 55
 AUTHOR: Gordeyev, V. Ye.; Serbinov, A. I.; Troshin, Ya. K.; Filatov, G. I. (Deceased)

ORG: none

TITLE: Initiation of the explosive conversion of condensed explosives by gaseous detonation

SOURCE: Nauchno-tekhnicheskiye problemy goreniya i vzryva, no. 2, 1965, 12-21

TOPIC TAGS: ^{1,55}gaseous detonation, ^{55,5}liquid explosive, tetranitromethane, benzene, methane, oxygen, ignition delay, detonation wave, detonation velocity

ABSTRACT: Initiation of the detonationⁿ of a tetranitromethane⁷-benzene⁷ mixture (1.5:1 by volume) by detonating a stoichiometric methane⁷-oxygen mixture was studied photographically using an experimental setup consisting of a thick-wall steel pipe with a 76-mm external diameter and a 10-mm internal diameter and a plexiglass tube with a 30-mm external diameter and a 10-mm internal diameter. The steel pipe was equipped with an electric detonator and was filled with the gaseous mixture. The plexiglass tube was filled with the liquid (or solid) explosive. The initial gas mixture pressure varied between 0.1 and 60 atm abs. Detonation of the liquid explosive by the reflected wave of the gaseous detonation occurred only at the initial gaseous mixture pressure of $p_0 \geq 2$ atm abs. The liquid explosion delay time τ decreased from 350 to 10 μ sec as the initial pressure in the gaseous mixture increased from 2 to 12 atm

Card 1/2

UDC: 532.595.2+534.222.2

L 9555-66

ACC NR: AP5026062

abs. At pressures of 24 atm abs., the ignition delay practically disappears, i.e., the explosive ignites instantly on contact with the gaseous detonation wave. Transition of accelerating combustion into detonation of the explosive occurred within 30 μ sec after ignition. A stoichiometric tetranitromethane-benzene mixture (4:1) is even more sensitive to the gaseous detonation; it is detonated at $p_0 \geq 0.66$ atm abs. with a delay time of 70 μ sec. The change in the ignition delay is attributed to the difference in the surface temperature of the explosive T_s . The delay time was measured at various temperatures and the experimental data were used to calculate T_s , which vary between 712 and 841K, depending on r . The same values of T_s (about 800K) were also obtained by a different method, which takes into account thermal conductivity, specific heats, and densities of the components of the gaseous mixture and of the combustion products. At the initial gas mixture pressure below 60 atm abs., the detonation velocities in both gases (about 2300 m/sec) and in the liquid explosive (6850 m/sec) are practically independent of pressure. Orig. art. has: 5 tables, 2 figures, and 4 formulas. [PS]

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back
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